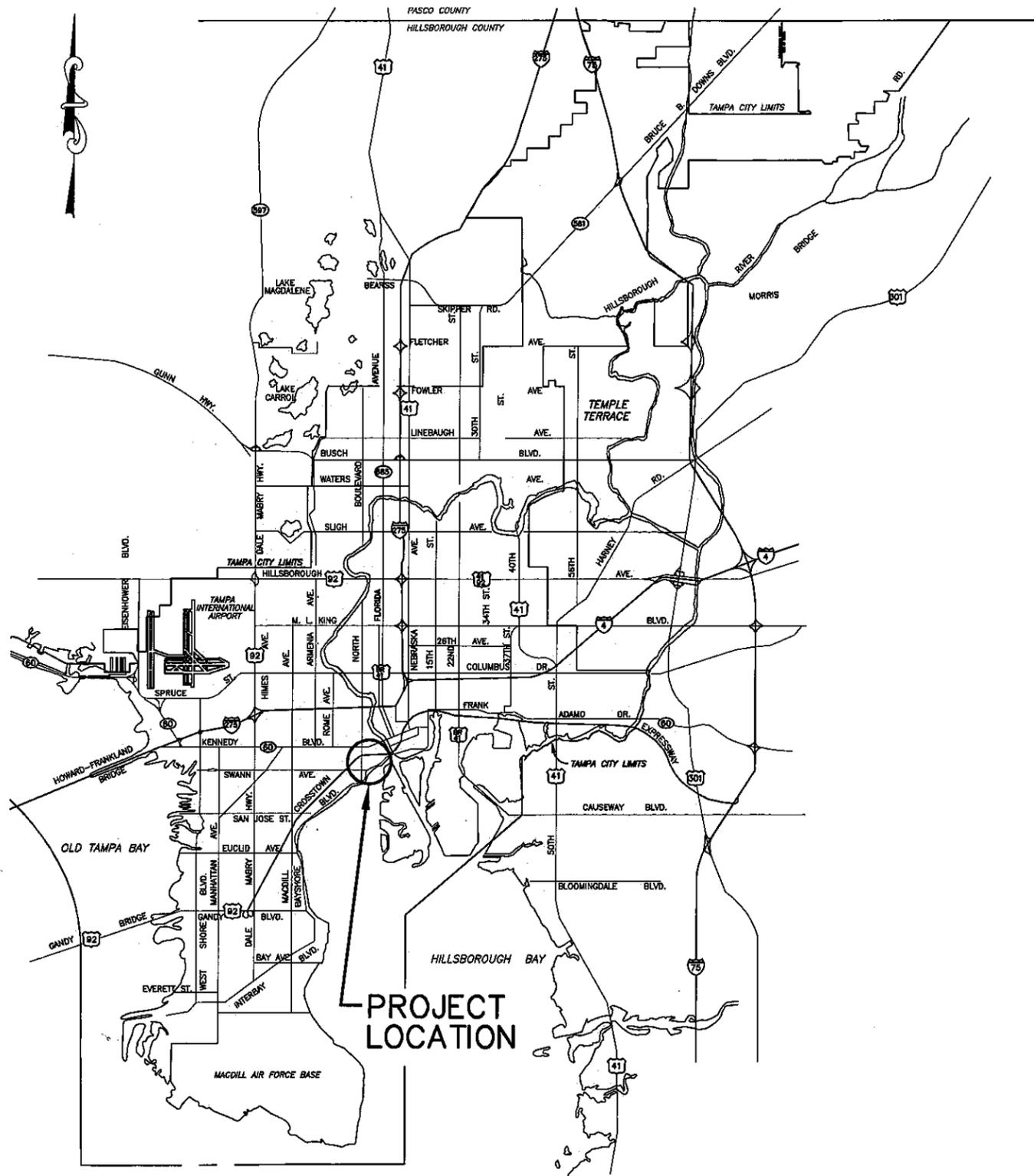


CITY of TAMPA



**DEPARTMENT OF
TRANSPORTATION AND STORMWATER SERVICES
STORMWATER ENGINEERING DIVISION**

**CONSTRUCTION PLANS FOR
EDISON AVENUE
GROUNDWATER DIVERSION UNDERDRAINS
PROJECT # 1000571
CONTRACT # 15-C-00035**



PLOT

FILENAME

[Signature]
RICHARD ALFRED HOEL, P.E. #41026
 CHIEF ENGINEER

DES: MICHAEL T. MILLER
 DRN: MCWILLIAMS/YARN
 CKD:
 DATE:

No.	DATE	REVISIONS
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2		
1		

CITY of TAMPA
 Department of Transportation and
 Stormwater Services
 Stormwater Engineering Division

COVER SHEET

SHEET
1
 OF 12

GENERAL NOTES:

SW 2015-06

1. The City of Tampa relied entirely upon the Boundary and Topographic Survey prepared by Suncoast Land Surveying, Inc. dated 10/20/14, for the existing conditions which were used as a base for this design.
2. The property shown hereon falls within Flood Zones "AE" and "X", as shown on the Flood Insurance Rate Map. Community Panel Number 12057C0361H, revised date August 28, 2008.
3. Elevations Shown Hereon are in feet and refer to the north American Vertical Datum of 1988. (N.A.V.D.)
4. Reference benchmark No.1: City of Tampa benchmark "HV-02 0170", Elevation = 12.83' N: 1,310,202 E: 504,893
Reference benchmark No.2: City of Tampa benchmark "HV-02 0136", Elevation = 4.64' N: 1,307,322 E: 502,277
5. The State Plane values are tied to the Florida State Plane coordinate system (grid), west zone north American Datum 1983-1991, adjustment 1990, and were derived from coordinates published by the NGS.
HORIZONTAL CONTROL POINT No.1: "FS9", N=1,318,023.58, E=498,982.45
HORIZONTAL CONTROL POINT No.2: "FRED", N=1,304,832.12, E=498,319.75
6. The location of existing utilities are approximate as shown and it is the contractor's responsibility to determine the exact location of the utilities prior to construction in their vicinity. The contractor shall notify all concerned public agencies and utility companies in the area before beginning construction, including "Sunshine" at 1-800-432-4770.
7. No underground installations or improvements have been located except as shown.
8. Prior to construction, the contractor shall submit shop drawings in PDF format to the Engineer for review. Shop drawings shall include:
 - a) Manhole shop drawings and conc. strength report.
 - b) Frame and cover shop drawings.
 - c) Storm structures and piping
 - d) Concrete mix design
9. At least five (5) days prior to construction of underground utilities, the contractor shall contact the City of Tampa Construction Administration to ensure availability of inspection personnel. Any work performed prior to notifying Engineer of Record or without a department inspector present may be subject to removal and replacement. Shop drawings shall be made available to City Inspector(s) upon request.
10. All design and construction must conform to the minimum standards set forth in City of Tampa Land Development Code and/or related ordinances such as Tree and Landscape Code, Stormwater Technical Standards and Fire Codes, allocable to the project at time of permitting.
11. The contractor shall keep record drawings of the utility work and shall submit one certified copy, prepared by a registered land surveyor to the engineer prior to final payment.
12. Construction material testing will be provided by the contractor. All soil density testing will be provided by the City of Tampa.
13. All right-of-way installations will be in accordance with practices referenced in the State of Florida Utilities Accommodations Manual and permitted through the City of Tampa.
14. All existing traffic signs shall be maintained throughout construction.
15. Prior to any construction/demolition, contractor shall schedule a pre-construction meeting with utility providers, F.D.O.T., city of Tampa and shall coordinate meeting with owner.
16. Contractor shall restore all landscaping, sodding and pavement that may be damaged during construction to its original condition or better. Contractor shall sod all unpaved areas.
17. All Historical cartouches or segments of existing walk shall be either preserved and reinstalled or preserved and protected in place. Cartouches to be preserved are not limited to those denoted on the plans. Other discovered during construction must be brought to attention of Engineer and preserved.
18. Contractor to meet on site with Historic Preservation prior to commencement of construction to review historic significance of infrastructure details and preservation methods. Contact Ron Villa at (813) 274-8236.
19. Sidewalks, driveways, curbs and street lights are all historically significant and must be preserved restored to City Preservation requirements. See sidewalks and driveway details on sheet 11.
20. Contractor to protect all existing private landscape walls along property lines, with shoring if necessary, during construction.
21. Verizon is service close to underdrain on west side. Coordinate with Verizon at (813) 975-2158, prior to construction.
22. Contractor to exercise caution when working near gas laterals. Contact TECO Gas for information

LIMITS OF CONSTRUCTION

RIGHT OF WAY EDISON AVE. - FROM NORTH EDGE OF PAVEMENT OF BAYSHORE BLVD. TO STATION 23+50, INCLUDING 15' OF SOUTHERN R/W AND 100' OF NORTHERN R/W OF MORRISON AVE. AND 100' OF R/W ON INMAN AVE, BOTH EAST AND WEST OF EDISON AVE.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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CITY of TAMPA
Department of Transportation
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Stormwater Engineering Division

EDISON AVENUE
GROUNDWATER DIVERSION

SHEET
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OF 12

LEGEND

EX UTILITIES

FORCE MAIN	
STORM PIPES & MANHOLES	
CATCH BASIN, GRATE	
SAN SEWER & MANHOLES	
WATER LINE	
GAS LINE	
ELECTRICAL CABLE or DUCT	
VERIZON CABLE or DUCT	
TV CABLE	
VALVE	
HYDRANT	
CLEAN OUT	
EXISTING WYE	
POWER POLE	
TELEPHONE POLE	
GUY POLE	
GUY WIRE	
VERIZON VAULT	
WATER METER	
RECLAIMED WATER METER	
ELECTRICAL MANHOLE or VAULT	
TELEPHONE MANHOLE or VAULT	
TRAFFIC BOX or VAULT	

OTHER FEATURES

RIGHT of WAY LINE	
EDGE of PAVEMENT	
BUILDING LIMIT	
PROPERTY OWNERSHIP	
FENCE	
IRON PIPE	
CONCRETE MONUMENT	

TREE LEGEND

(SEE TREE DETAILS ON SHEET 12 FOR SPECIES)

OAK	
PALM	
OTHER	
SHRUB	
HEDGE	

ABBREVIATIONS

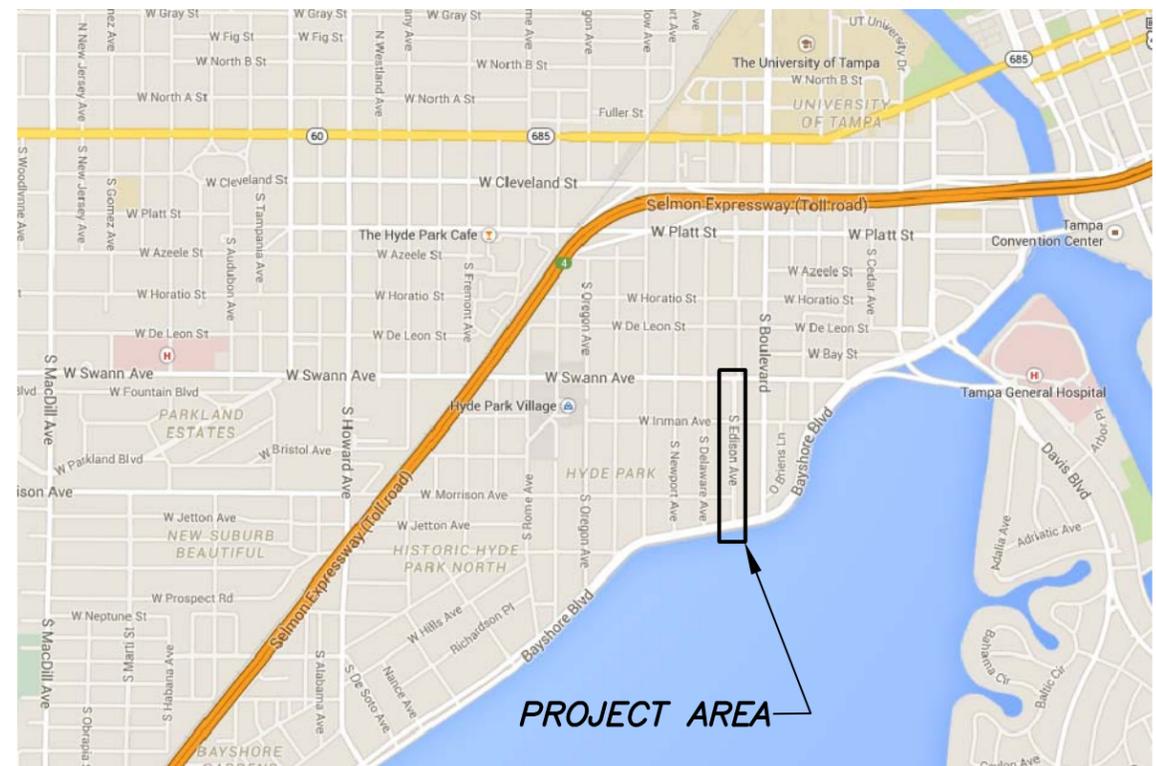
TOP of PIPE	TP
INVERT ELEVATION	IE or INV EL
RIGHT of WAY	R/W
MANHOLE	MH
POLYVINYL CHLORIDE PIPE	PVCP
VITRIFIED CLAY PIPE	VCP
ADVANCED DRAINAGE SYSTEM	ADS
DUCTILE IRON PIPE	DIP
REINFORCED CONCRETE PIPE	RCP
CONCRETE PIPE	CP
APPROXIMATE LOCATION	AL
BENCH MARK	BM
POINT of INTERSECTION	PI

PROPOSED

TREE BARRICADE		NOT TO SCALE ON PLANS. SEE DETAILS ON SHEET 12.
PROPOSED UNDERDRAIN (SEE SHEET NO. 11 FOR DETAIL)		
DIRECTIONAL BORE THROUGH TREE ROOTS		
SIDEWALK TO BE REMOVED AND REPLACED		
DRIVEWAY TO BE REMOVED AND REPLACED		
HISTORIC CARTOUCHE TO BE PROTECTED (SEE NOTES)		

INDEX

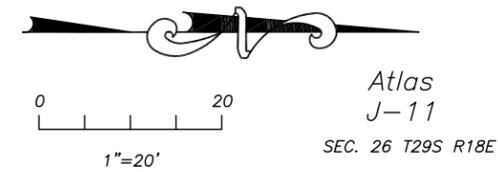
No.	DESCRIPTION
1	COVER SHEET
2	GENERAL AND STRUCTURAL NOTES
3	LEGEND, INDEX, AND MAP
4	UNDERDRAIN CONSTRUCTION PLAN
5	UNDERDRAIN CONSTRUCTION PLAN
6	UNDERDRAIN CONSTRUCTION PLAN
7	UNDERDRAIN CONSTRUCTION PLAN
8	UNDERDRAIN CONSTRUCTION PLAN
9	UNDERDRAIN CONSTRUCTION PLAN
10	DETAILS
11	DETAILS
12	DETAILS



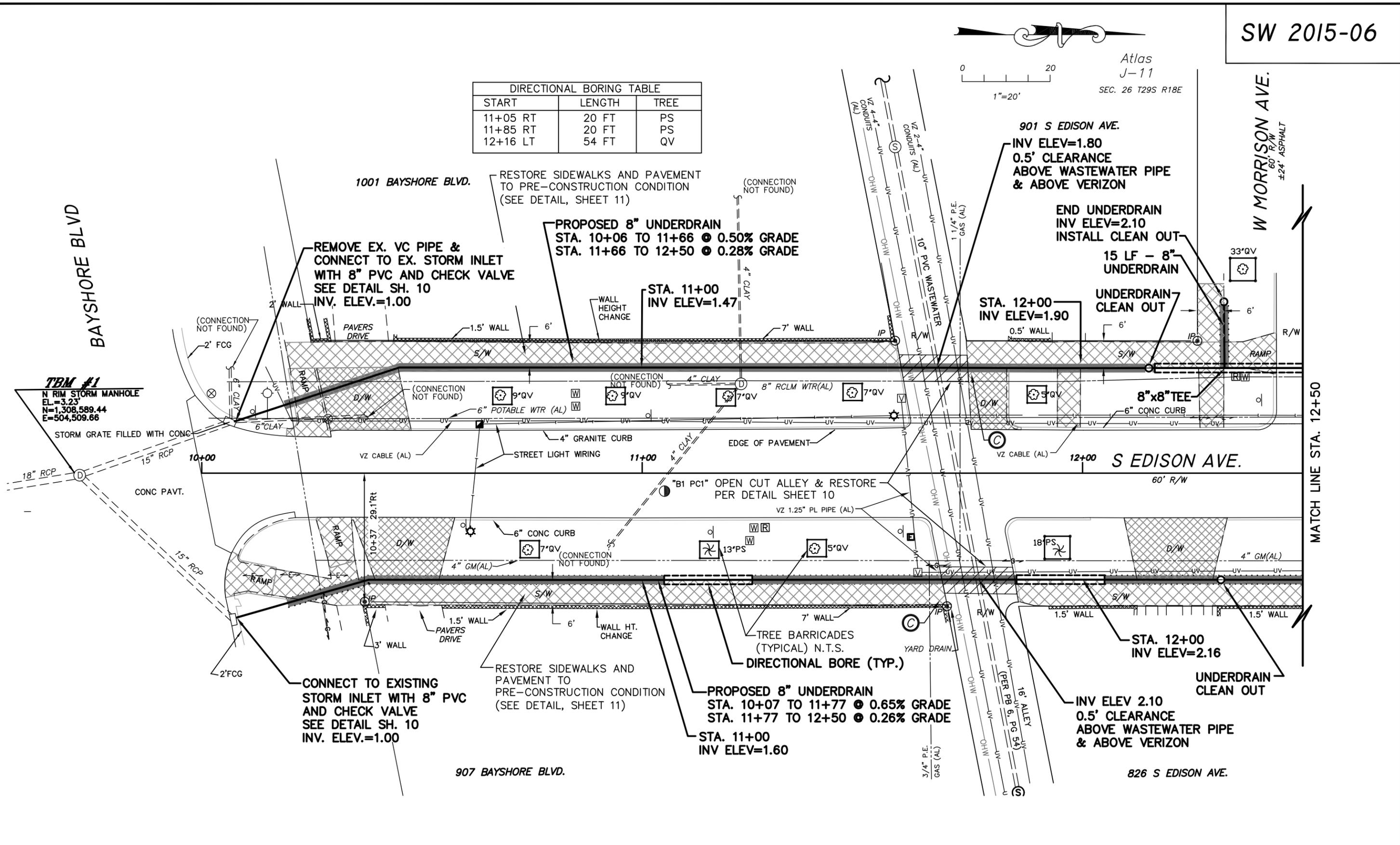
LOCATION MAP

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DIRECTIONAL BORING TABLE		
START	LENGTH	TREE
11+05 RT	20 FT	PS
11+85 RT	20 FT	PS
12+16 LT	54 FT	QV



TBM #1
 N RIM STORM MANHOLE
 EL.=3.23'
 N=1,308,589.44
 E=504,509.66

CONNECT TO EXISTING STORM INLET WITH 8" PVC AND CHECK VALVE SEE DETAIL SH. 10 INV. ELEV.=1.00

RESTORE SIDEWALKS AND PAVEMENT TO PRE-CONSTRUCTION CONDITION (SEE DETAIL, SHEET 11)

PROPOSED 8" UNDERDRAIN
 STA. 10+07 TO 11+77 @ 0.65% GRADE
 STA. 11+77 TO 12+50 @ 0.26% GRADE
 STA. 11+00 INV ELEV=1.60

INV ELEV 2.10
 0.5' CLEARANCE ABOVE WASTEWATER PIPE & ABOVE VERIZON

END UNDERDRAIN INV ELEV=2.10
 INSTALL CLEAN OUT

15 LF - 8" UNDERDRAIN

STA. 12+00 INV ELEV=1.90

STA. 11+00 INV ELEV=1.47

PROPOSED 8" UNDERDRAIN
 STA. 10+06 TO 11+66 @ 0.50% GRADE
 STA. 11+66 TO 12+50 @ 0.28% GRADE

REMOVE EX. VC PIPE & CONNECT TO EX. STORM INLET WITH 8" PVC AND CHECK VALVE SEE DETAIL SH. 10 INV. ELEV.=1.00

1001 BAYSHORE BLVD.

RESTORE SIDEWALKS AND PAVEMENT TO PRE-CONSTRUCTION CONDITION (SEE DETAIL, SHEET 11)

BAYSHORE BLVD

W MORRISON AVE.
 60' R/W
 ±24' ASPHALT

S EDISON AVE.

MATCH LINE STA. 12+50

907 BAYSHORE BLVD.

826 S EDISON AVE.

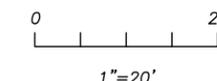
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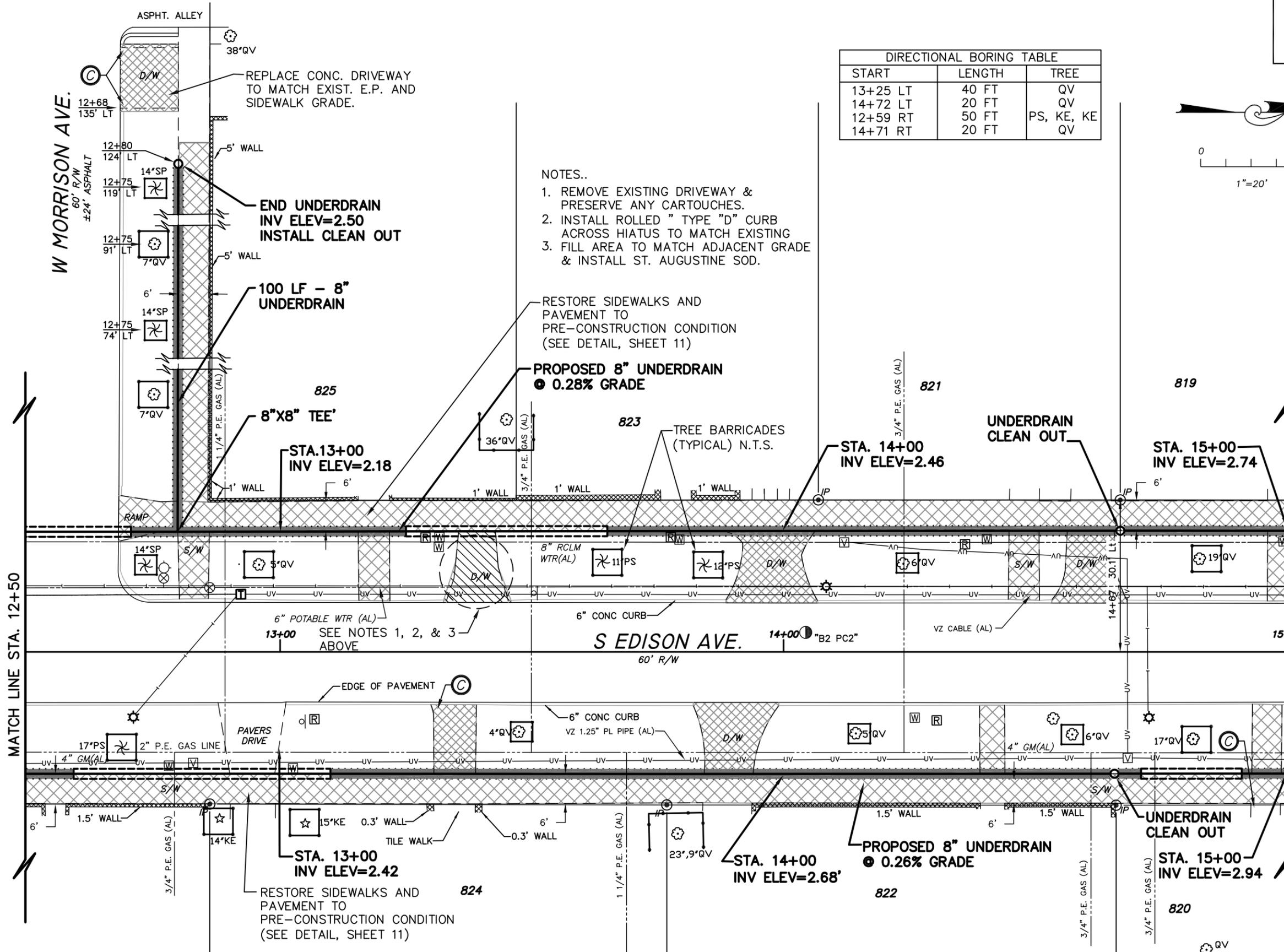
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 and Stormwater Services
 Stormwater Engineering Division

EDISON AVENUE
 GROUNDWATER DIVERSION

DIRECTIONAL BORING TABLE		
START	LENGTH	TREE
13+25 LT	40 FT	QV
14+72 LT	20 FT	QV
12+59 RT	50 FT	PS, KE, KE
14+71 RT	20 FT	QV



Atlas
J-11
SEC. 26 T29S R18E



- NOTES..
1. REMOVE EXISTING DRIVEWAY & PRESERVE ANY CARTOUCHES.
 2. INSTALL ROLLED " D " CURB ACROSS HIATUS TO MATCH EXISTING
 3. FILL AREA TO MATCH ADJACENT GRADE & INSTALL ST. AUGUSTINE SOD.

RESTORE SIDEWALKS AND PAVEMENT TO PRE-CONSTRUCTION CONDITION (SEE DETAIL, SHEET 11)

PROPOSED 8" UNDERDRAIN @ 0.28% GRADE

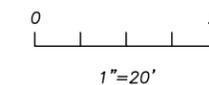
PROPOSED 8" UNDERDRAIN @ 0.26% GRADE

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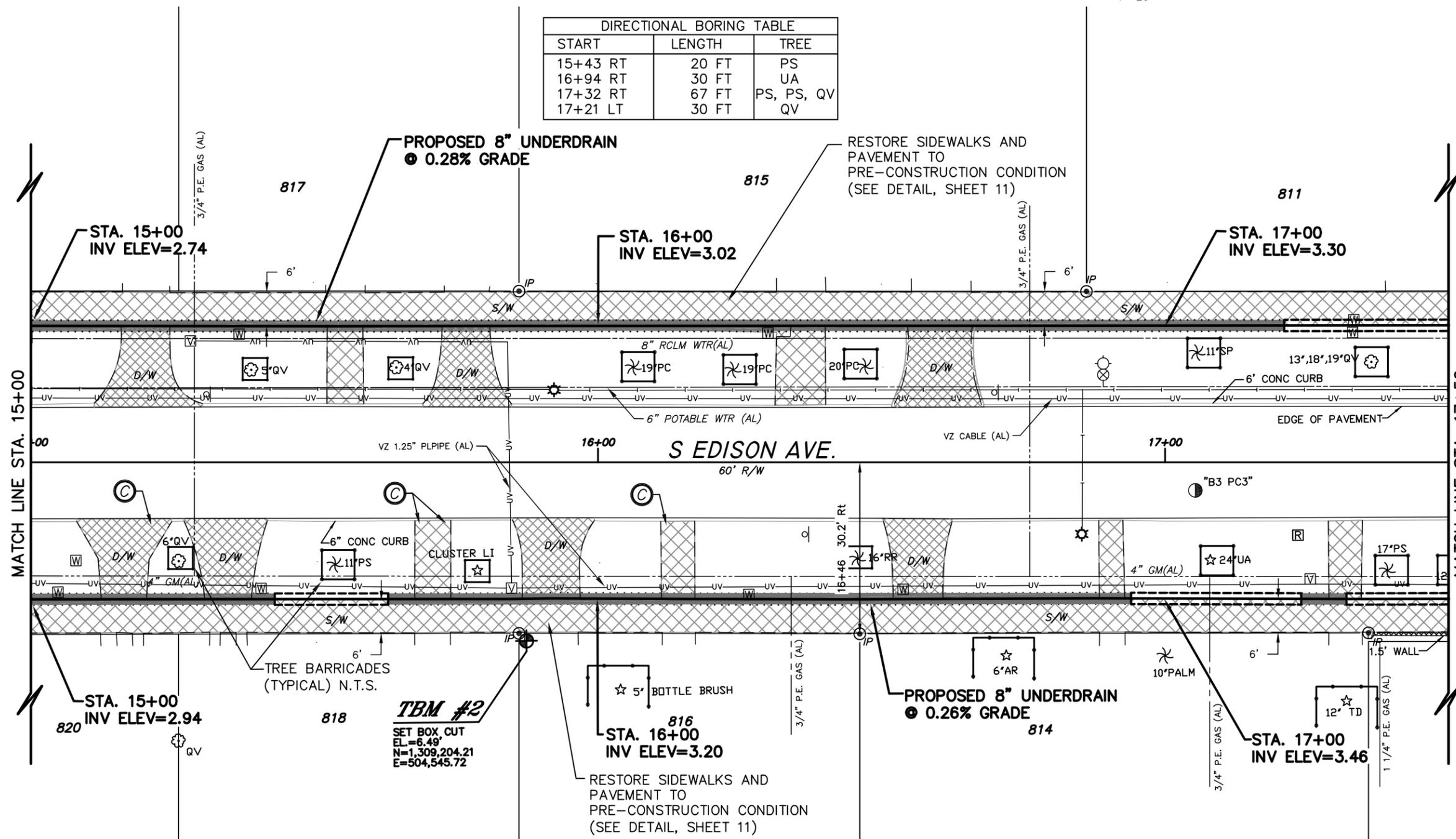
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Stormwater Engineering Division

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J-11
SEC. 26 T29S R18E

DIRECTIONAL BORING TABLE		
START	LENGTH	TREE
15+43 RT	20 FT	PS
16+94 RT	30 FT	UA
17+32 RT	67 FT	PS, PS, QV
17+21 LT	30 FT	QV



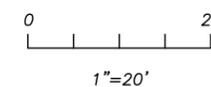
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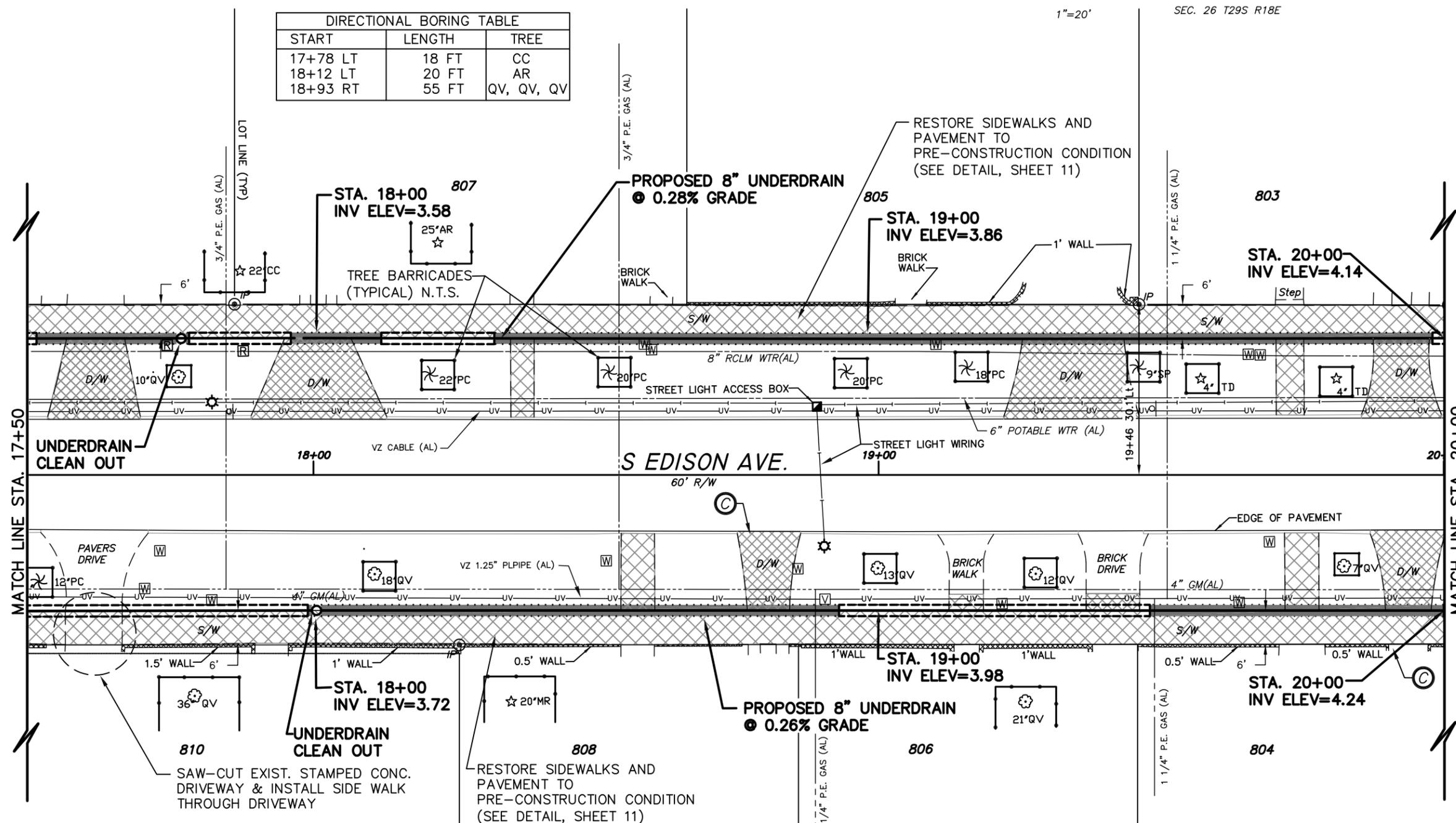
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GROUNDWATER DIVERSION

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Atlas
J-11
SEC. 26 T29S R18E

DIRECTIONAL BORING TABLE		
START	LENGTH	TREE
17+78 LT	18 FT	CC
18+12 LT	20 FT	AR
18+93 RT	55 FT	QV, QV, QV

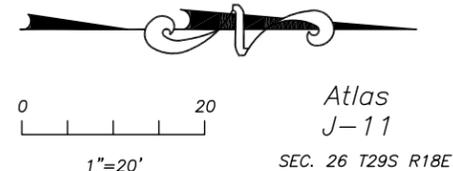


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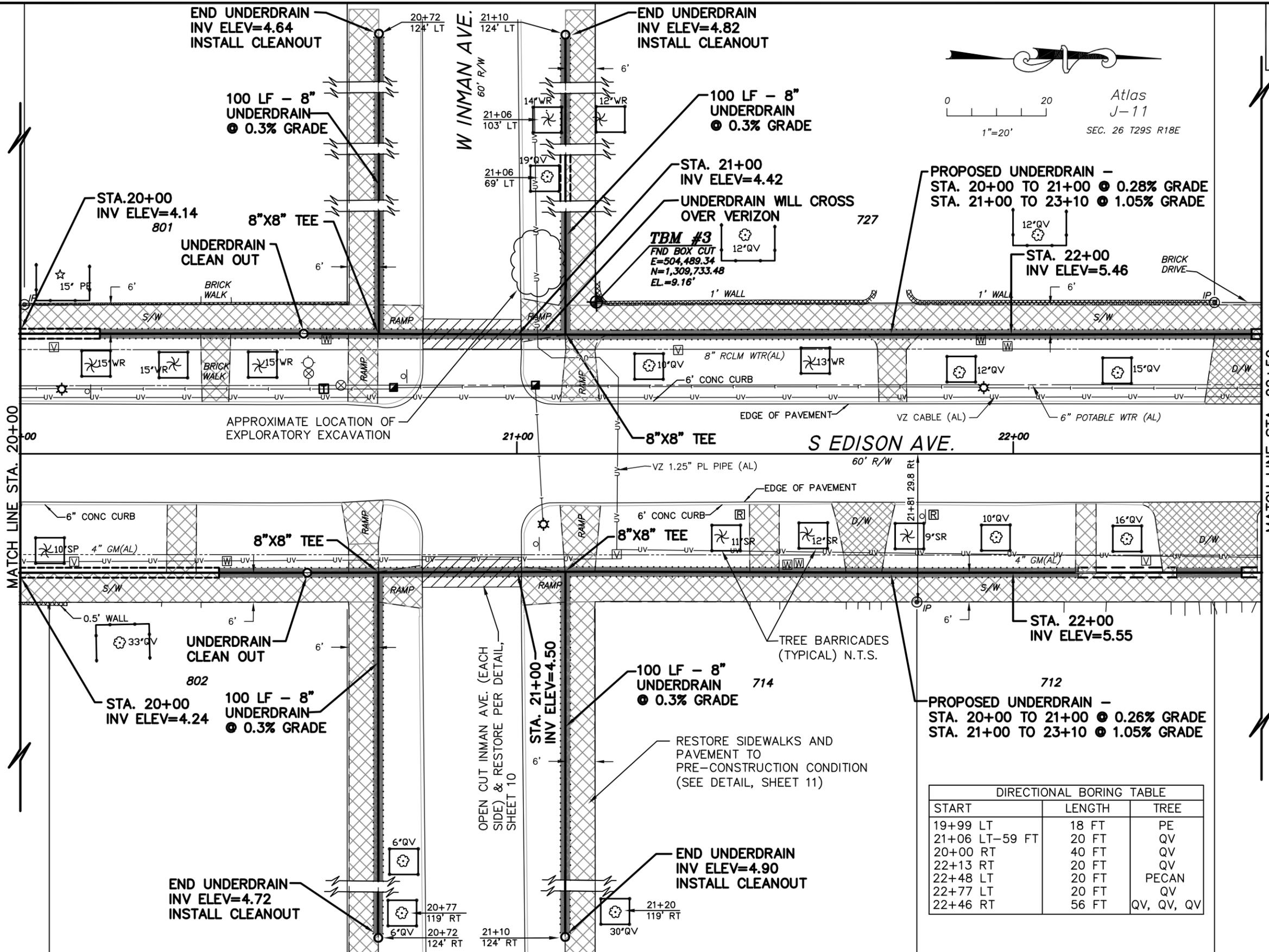
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EDISON AVENUE
 GROUNDWATER DIVERSION



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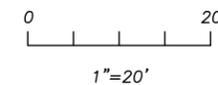
MATCH LINE STA. 20+00

MATCH LINE STA. 22+50

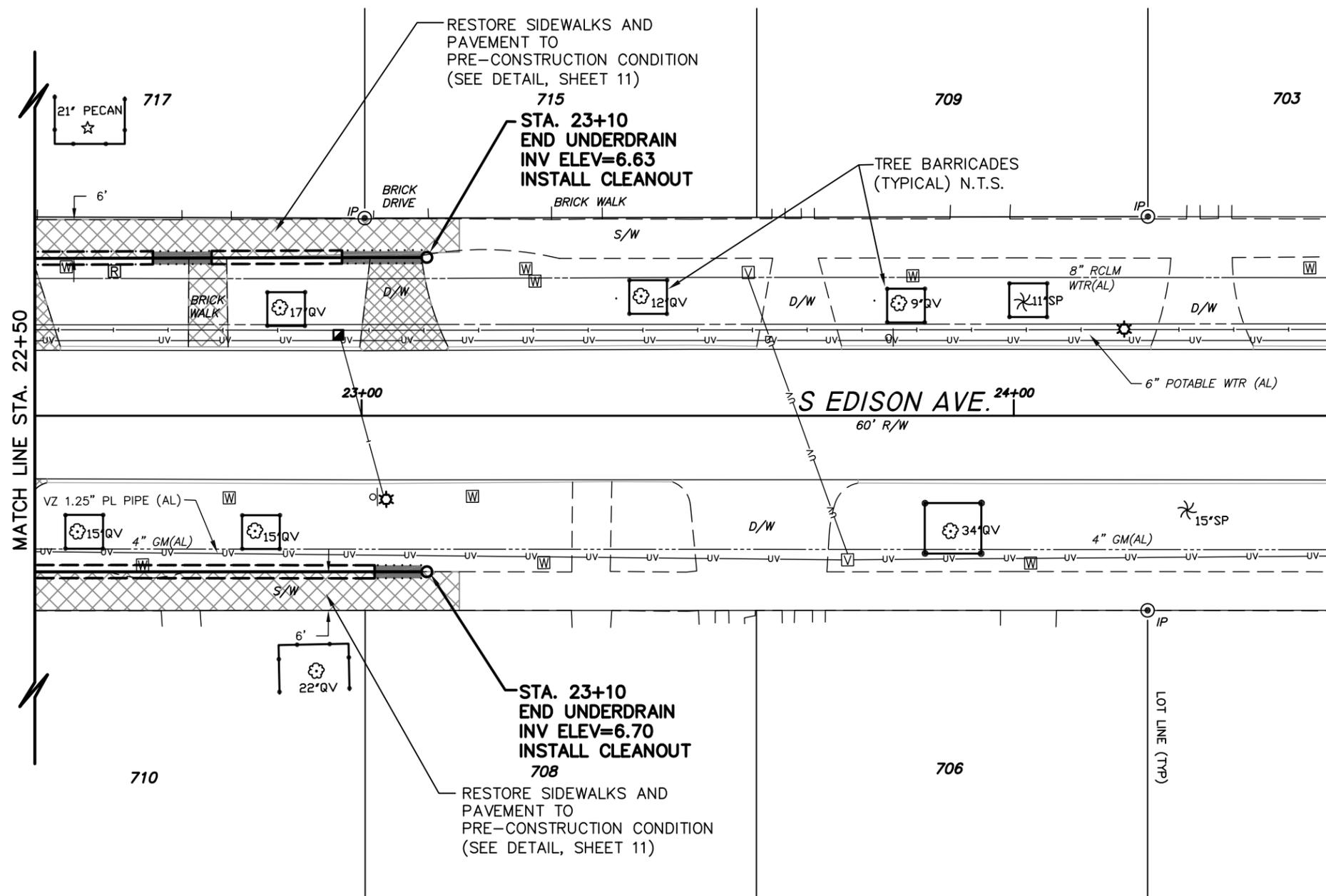
DIRECTIONAL BORING TABLE		
START	LENGTH	TREE
19+99 LT	18 FT	PE
21+06 LT-59 FT	20 FT	QV
20+00 RT	40 FT	QV
22+13 RT	20 FT	QV
22+48 LT	20 FT	PECAN
22+77 LT	20 FT	QV
22+46 RT	56 FT	QV, QV, QV

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DES: MTM DRN: CMM/DY CKD: DATE:	CITY of TAMPA Department of Transportation and Stormwater Services Stormwater Engineering Division	EDISON AVENUE GROUNDWATER DIVERSION	SHEET 8 OF 12
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SEC. 26 T29S R18E

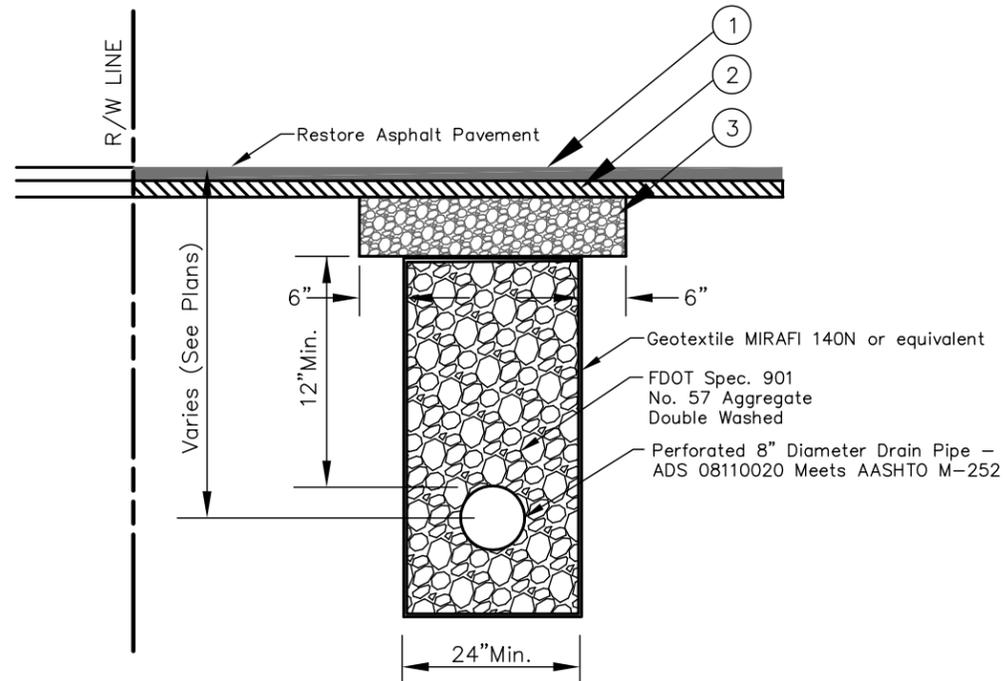


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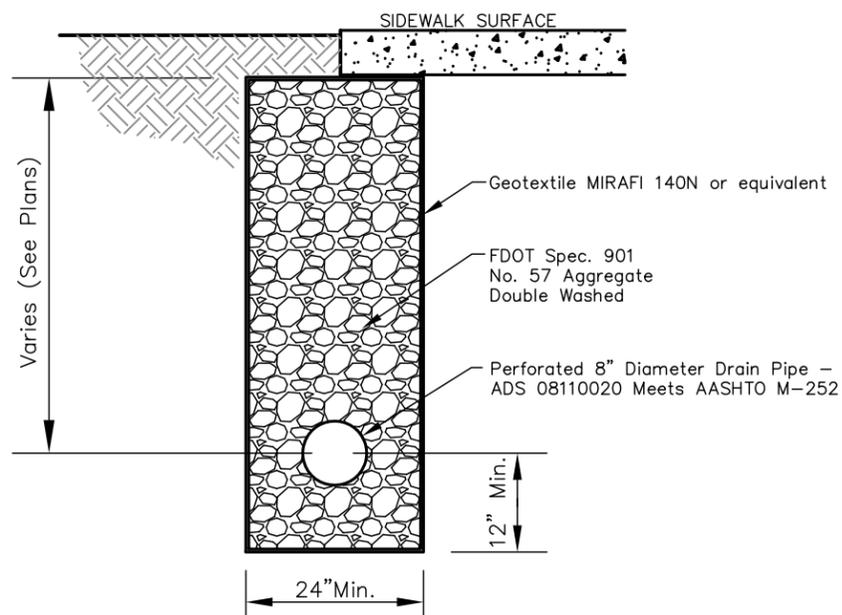
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GROUNDWATER DIVERSION



TRENCH DETAIL AT ALLEYS & ROADWAYS

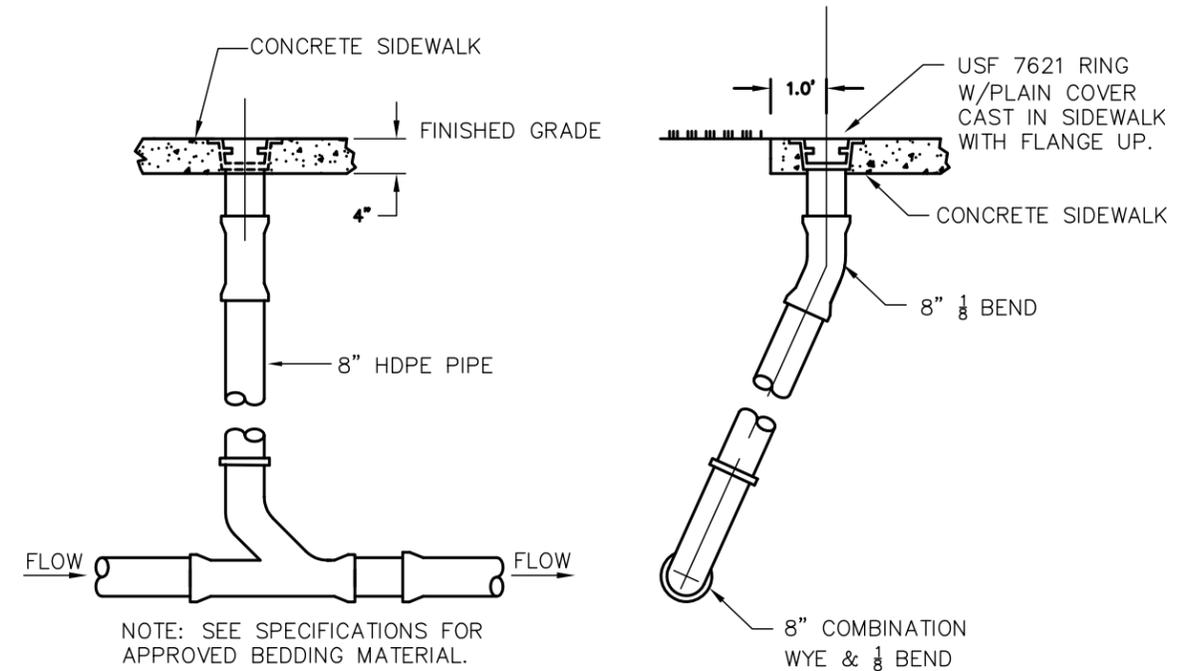
N.T.S.

- ① TYPE S-3 ASPHALT (1")
- ② TYPE S-1 ASPHALT (3") OR MATCH EXISTING
- ③ CRUSHED CONCRETE BASE (8")



UNDERDRAIN DETAIL

N.T.S.



NOTE: SEE SPECIFICATIONS FOR APPROVED BEDDING MATERIAL.

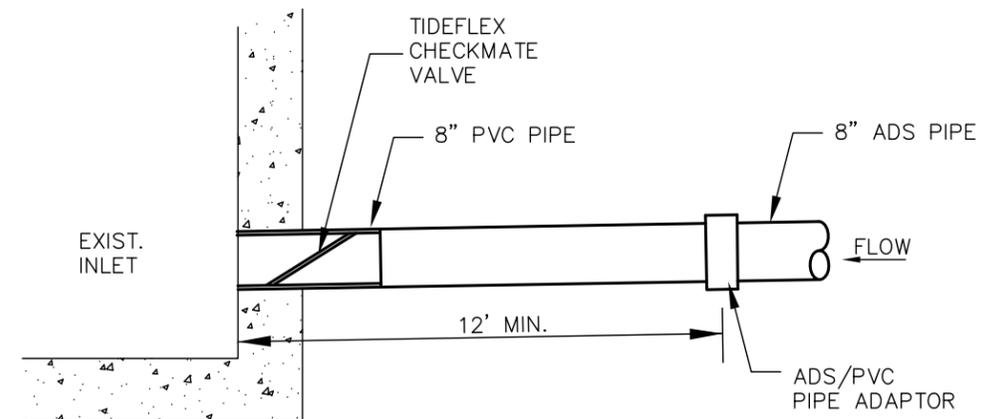
SIDE VIEW

FRONT VIEW

ONE WAY CLEAN-OUT

CLEAN OUT DETAIL

N.T.S.



INLET TIE-IN DETAIL

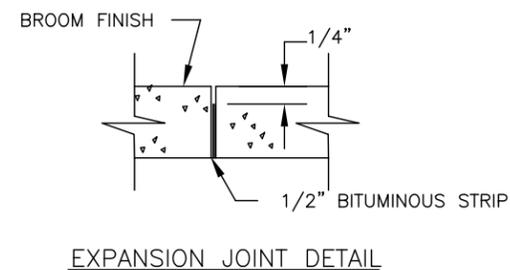
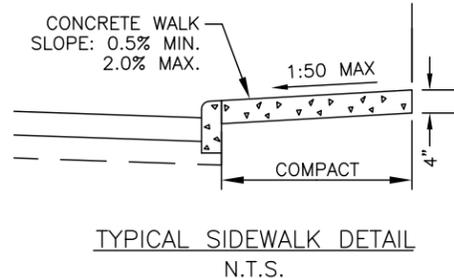
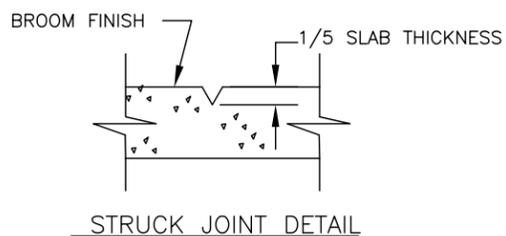
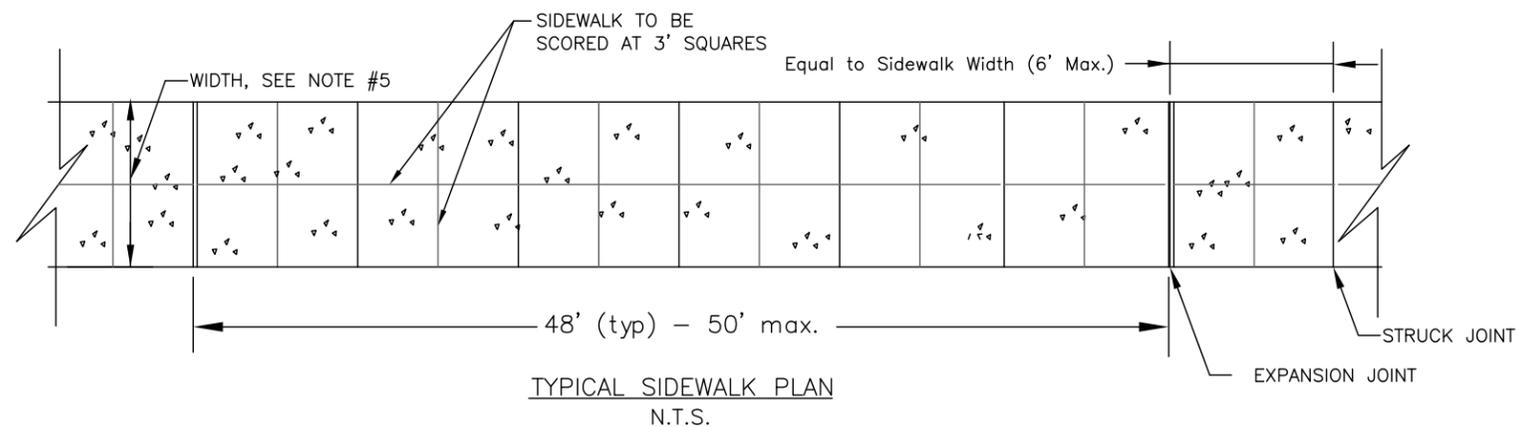
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 GROUNDWATER DIVERSION



- NOTES:
1. SIDEWALKS SHALL HAVE TOOLED EDGES.
 2. CONSTRUCTION JOINTS SHALL BE LOCATED AT STRUCK JOINTS OR EXPANSION JOINTS ONLY.
 3. EXPANSION JOINTS SHALL BE INSTALLED AS SHOWN AND ALONG ABUTTING CURB. EXPANSION JOINTS SHALL CONSIST
 4. OF CONTINUOUS 1/2" X 4" BITUMINOUS EXPANSION STRIP, AS SHOWN.
 5. SIDEWALKS TO BE 6' WIDE.
 6. CONCRETE SIDEWALK TO BE 4" THICK.
 7. CONCRETE DRIVEWAYS TO BE 6" THICK.
 8. CONCRETE SIDEWALK ADJACENT TO DRIVEWAYS TO BE 6" THICK.
 9. ALL CONCRETE TO BE FDOT CLASS III, 4,500 P.S.I.
 10. ALL H.C. RAMPS TO BE REPLACED AND DETECTABLE WARNING STRIPS SHALL INSTALLED PER FDOT INDEX NO. 304.

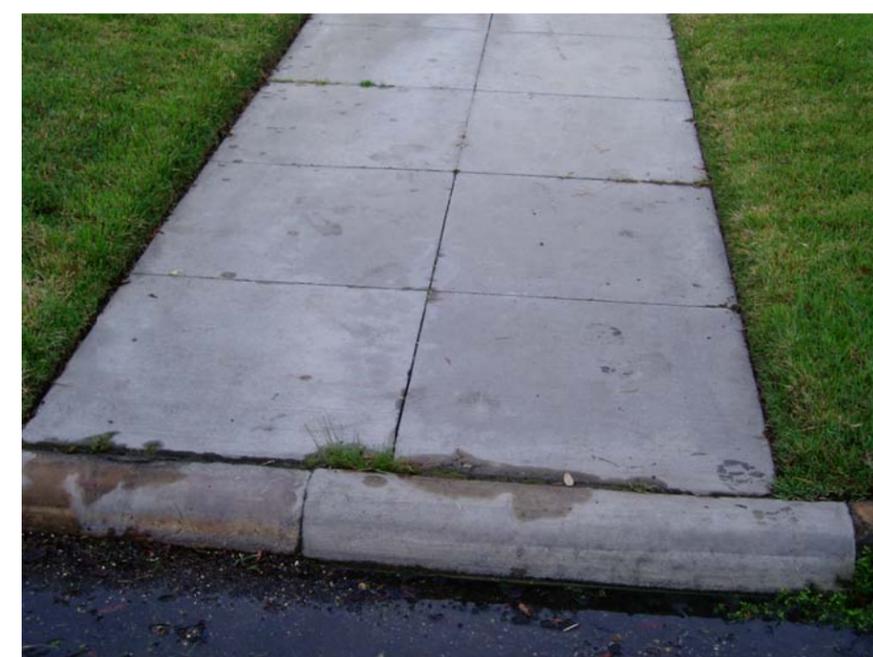
CONCRETE SIDEWALK CONSTRUCTION
N.T.S.



EXAMPLE OF DRIVEWAY RECONSTRUCTION



EXAMPLE OF DRIVEWAY RECONSTRUCTION



EXAMPLE OF SIDEWALK RECONSTRUCTION

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TREE NOTES

1. All work within the protective radius of trees must be coordinated with Planning and Development, in accordance with Chapter 13 of The City of Tampa Code and Parks and Recreation who can be reached at (813) 274-8615.
2. Prior to any construction activities, protective barricades shall be installed around all protected trees and grand trees within 15 feet of underdrain or improvement replacement.
 - a) Barricades shall be installed a minimum of ten (10) feet from a protective tree and a minimum of twenty (20) feet from a grand tree.
3. No changes shall take place to the predevelopment conditions within the protective root zone during the construction process, unless noted on the plans.
4. No parking or storage of vehicles, equipment or materials is allowed within the protective root zone.
5. All tree trimming and root pruning must be supervised by a certified arborist and performed cleanly with approved cutting tree equipment such as chainsaw, hand saw or other equipment
6. Directional drilling through tree roots must be performed where shown on the plans and must be coordinated with Parks and Recreation.

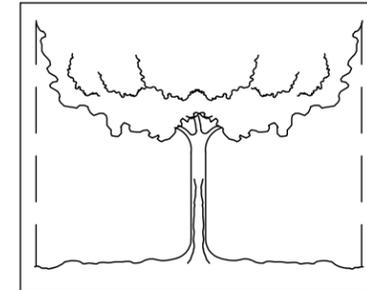


Fig. A

1. TREES – To restrict access into the area within the DRIPLINE of a tree, a physical structure not less than 3 feet in height, comprised of wood or other suitable material, is placed around the tree at the DRIPLINE, except where land alteration or construction activities are approved within the dripline.
2. The DRIPLINE of a tree is the imaginary, verticle line that extends downward from the outermost tips of the tree's branches to the ground. Fig. A.

BARRIER SPECIFICATIONS FOR TREES:

Four corner upright stakes of no less than 2" x 2" lumber connected by horizontal members of no less than 1" x 4" lumber; or upright stakes spaced at 4-5' intervals of no less 2" x 2" lumber connected by SILT FENCING.

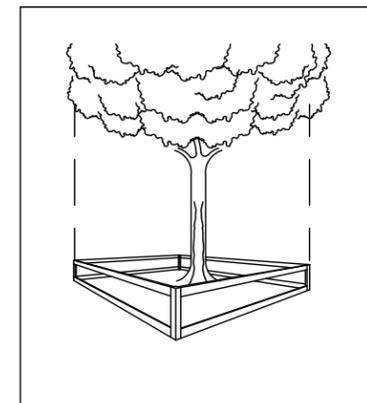


Fig. B

3. NATURAL AREAS – To restrict access into areas where land alteration and construction activities are not authorized, a physical structure not less than 3 feet in height is placed along the perimeter of such areas.

BARRIER SPECIFICATIONS FOR NATURAL AREAS:

Upright stakes of no less than 2" x 2" lumber spaced no more than 25' apart and connected by twine flagged with plastic surveying tape at regular intervals of 5-10'. Fig. C. Other methods of demarcation will be considered depending upon the characteristics of the site.

WHY A BARRIER:

1. To protect all above ground portions of trees and other significant vegetation from mechanical damage.
2. To protect root systems from compaction.
3. To provide awareness of protected areas to equipment operators.

WHY IT WORKS:

A tree's chance for survival is greatly enhanced if no construction material, heavy equipment or stockpiling of soil is allowed inside the barrier; only hand labor.

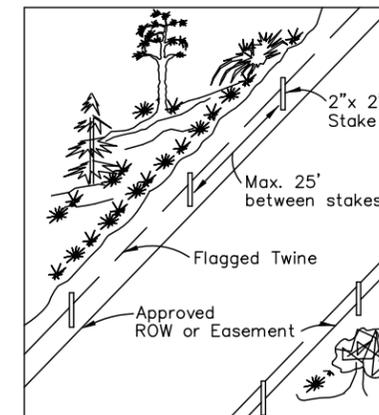


Fig. C

Protective barriers are used during land alteration natural areas to be retained on a site.

Protective barriers must be erected around TREES to construction activities will occur as well as along permitted land alteration and construction activities. land alteration and construction activities are sodding. No ground disturbance must occur within the barricaded area.

TREE SPECIES

QV	Live Oak	TD	Bald Cypress
PS	Phoenix Sylvestris	PE	Slash Pine
LI	Crepe Myrtle	WR	Washontonia Palm
KE	Golden Rain Tree	SR	Queen Palm
SP	Sabal Palm	RR	Royal Palm
PC	Canary Date Palm	AR	Red Maple
CC	Camphor	UA	Winged Elm
MR	Magnolia		

PROTECTIVE BARRICADE DETAIL

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